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         RAW SEQUENCE LISTING               DATE: 07/27/2001
         PATENT APPLICATION:  US/09/700,770   TIME: 19:51:56

         Input Set : A:\Dex-36.app
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     2 <110> APPLICANT: Yang Fei
     3        Macina, Roberto A.
     4        Sun, Yongming
     6 <120> TITLE OF INVENTION: A Novel Method of Diagnosing, Monitoring and Staging Lung
Cancer
     8 <130> FILE REFERENCE: DEX-0036
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/700,770
C--> 11 <141> CURRENT FILING DATE: 2000-11-20
    13 <150> PRIOR APPLICATION NUMBER: 60/086,212
    14 <151> PRIOR FILING DATE: 1998-05-21
    16 <160> NUMBER OF SEQ ID NOS: 9   .
    18 <170> SOFTWARE: PatentIn Ver. 2.0
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    21 <211> LENGTH: 507
    22 <212> TYPE: DNA
    23 <213> ORGANISM: Homo sapiens
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    27 aaaaatatcc cagataactg tcatgaagct ggtaactatc ttcctgctgg tgaccatcag 120
    28 cctttgtagt tactctgcta ctgccttcct catcaacaaa gtgccccttc ctgttgacaa 180
    29 gttggcacct ttacctctgg acaacattct tccctttatg gatccattaa agcttcttct 240
    30 gaaaactctg ggcatttctg ttgagcacct tgtggagggg ctaaggaagt gtgtaaatga 300
    31 gctgggacca gaggcttctg aagctgtgaa gaaactgctg gaggcgctat cacacttggt 360
    32 gtgacatcaa gataaagagc ggaggtggat ggggatggaa gatgatgctc ctatcctccc 420
    33 tgcctgaaac ctgttctacc aattatagat caaatgccct aaaatgtagt gacccgtgaa 480
    34 aaggacaaat aaagcaatga atacatt                                     507
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    38 <212> TYPE: DNA
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    43 ccgaggactc cagcgtgccc aggtctggca tcctgcactt gctgccctct gacacctggg 120
    44 aagatggccg gcccgtggac cttcaccctt ctctgtggtt tgctggcagc caccttgatc 180
    45 caagccaccc tcagtcccac tgcagttctc atcctcggcc caaaagtcat caaagaaaag 240
    46 ctgacacagg agctgaagga ccacaacgcc accagcatcc tgcagcagct gccgctgctc 300
    47 agtgccatgc gggaaaagcc agccggagga tccctgtgct gggcagcctg gtgaacaccg 360
    48 tcctgaagca catcatctgg ctgaaggtca tcacagctaa catcctccag ctgcaggtga 420
    49 agccctcggc caatgaccag gagctgctag tcaagatccc cctggacatg gtggctggat 480
    50 tcaacacgcc cctggtcaag accatcgtgg agttccacat gacgactgag gcccaagcca 540
    51 ccatccgcat ggacaccagt gcaagtggcc ccacccgcct ggtcctcagt gactgtgcca 600
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    53 tagctaagca ggtcatgaac ctcctagtgc catccctgcc caatctagtg aaaaaccagc 720
    54 tgtgtcccgt gatcgaggct tccttcaatg gcatgtatgc agacctcctg cagctggtga 780
    55 aggtgcccat ttccctcagc attgaccgtc tggagtttga ccttctgtat cctgccatca 840
    56 agggtgacac cattcagctc tacctggggg ccaagttgtt ggactcacag ggaaaggtga 900
    57 ccaagtggtt caataactct gcagcttccc tgacaatgcc caccctggac aacatcccgt 960
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RAW SEQUENCE LISTING   DATE: 07/27/2001
PATENT APPLICATION: US/09/700,770   TIME: 19:51:57

Input Set : **A:\Dex-36.app**
Output Set: **N:\CRF3\07272001\I700770.raw**

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 60 gcatcgggct gatcaatgaa aaggctgcag ataagctggg atctacccag atcgtgaaga 1140
 61 tcctaactca ggacactccc gagttttta tagaccaagg ccatgccaag gtggcccaac 1200
 62 tgatcgtgct ggaagtgttt ccctccagtg aagccctccg ccctttgttc accctgggca 1260
 63 tcgaagccag ctcggaagct cagttttaca ccaaaggtga ccaacttata ctcaacttga 1320
 64 ataacatcag ctctgatcgg atccagctga tgaactctgg gattggctgg ttccaacctg 1380
 65 atgttctgaa aaacatcatc actgagatca tccactccat cctgctgccg aaccagaatg 1440
 66 gcaaattaag atctggggtc ccagtgtcat tggtgaaggc cttgggattc gaggcagctg 1500
 67 agtcctcact gaccaaggat gcccttgtgc ttactccagc ctccttgtgg aaacccagct 1560
 68 ctcctgtctc ccagtgaaga cttggatggc agccatcagg gaaggctggg tcccagctgg 1620
 69 gagtatgggt gtgagctcta tagaccatcc ctctctgcaa tcaataaaca cttgcctgtg 1680
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 74 <213> ORGANISM: Homo sapiens
 76 <400> SEQUENCE: 3
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 79 caagaaggtt caaaaacttc agcgagcagc tctgaagaat cctgtgaaat gtgccgtttc 180
 80 ctctaaatac cagacagttg aaaaattaca gcaatattat atttttattc cctctaaatt 240
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 82 ctgcagcacc tgtaataata cccagagaac agctttgcta ctgcgaaatc ttggcttcac 360
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 84 taaggccaag gcccgttcca ttcttctagc aactgacgtt gccagccgag gtttggacat 480
 85 acctcatgta gatgtggttg tcaactttga cattcctacc cattccaagg attacatcca 540
 86 tcgagtaggt cgaacagcta gagctgggcg ctccggaaag gctattactt ttgtcacaca 600
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 88 tccaacacag gatgatgagg ttatgatgct gacagaacgc gtccccagcg atgtctccac 720
 89 caccgctgct gcaacccctg ctgctgctgc tgcctctgct gaatgtggag ccttccgggg 780
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 91 tgaggggatg gagagaacca gcagagctcc ccaagttggg ggccccatcc cctggggaca 900
 92 agcccatctt cgtacctctc tcgaactaca gggatgtgca gtattttggg gaaattgggc 960
 93 tgggaacgcc tccacaaaac ttcactgttg cctttgacac tggctcctcc aatctctggg 1020
 94 tcccgtccag gagatgccac ttcttcagtg tgccctgctg gttacaccac cgatttgatc 1080
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 97 cagtgatttt cggggaggct ctctgggagc ccagcctggt cttcgctttt gcccattttg 1260
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102 gtgtgaaggt gggcccaggg ctgactctct gtgccaaggg ctgtgctgcc atcctggata 1560
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107 ctccgcctgc agggcccttc tggatcctcg gtgacgtctt cttggggacg tatgtggccg 1860
108 tcttcgaccg cggggacatg aagagcagcg cccgggtggg cctggcgcgc gctcgcactc 1920
109 gcggagcgga cctcggatgg ggagagactg cgcaggcgca gttccccggg tgacgcccaa 1980
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RAW SEQUENCE LISTING   DATE: 07/27/2001
PATENT APPLICATION: US/09/700,770   TIME: 19:51:57

Input Set : A:\Dex-36.app
Output Set: N:\CRF3\07272001\I700770.raw

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114 <211> LENGTH: 315
115 <212> TYPE: DNA
116 <213> ORGANISM: Homo sapiens
118 <400> SEQUENCE: 4
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120 tctccaccac ttaagtatat ctcttagaga tctacagcct ccctttaggg gacatacaaa 120
121 gtcagttgtg ttgcctttgt tgagtcccac cttatattca agtaggtatg actacaaatt 180
122 ttgaaaatag attgtcacac aataaactgg agtttatgga aacatcagta gaaggaaata 240
123 caacattcca tccctttaca gagatcattt acttgcaact caggataatt tgtcatgtgt 300
124 attatctact tatgc                                                    315
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133 acgctggcct gggactaaag catagaccac caggctgagt atcctgacct gagtcatccc 120
134 cagggatcag gagcctccag cagggaacct tccattatat tcttcaagca acttacagct 180
135 gcaccgacag ttgcgatgaa agttctaatc tcttccctcc tcctgttgct gccactaatg 240
136 ctgatgtcca tggtctctag cagcctgaat ccaggggtcg ccagaggcca cagggaccga 300
137 ggccaggctt ctaggagatg gctccaggaa ggcggccaag aatgtgagtg caaagattgg 360
138 ttcctgagag ccccgagaag aaaattcatg acagtgtctg ggctgccaaa gaagcagtgc 420
139 ccctgtgatc atttcaaggg caatgtgaag aaaacaagac accaaaggca ccacagaaag 480
140 ccaaacaagc attccagagc ctgccagcaa tttctcaaac aatgtcagct aagaagcttt 540
141 gctctgcctt tgtaggagct ctgagcgccc actcttccaa ttaaacattc tcagccaaga 600
142 agacagtgag cacacctacc agacactctt cttctcccac ctcactctcc cactgtaccc 660
143 acccctaaat cattccagtg ctctcaaaaa gcatgttttt caagatcatt ttgtttgttg 720
144 ctctctctag tgtcttcttc tctcgtcagt cttagcctgt gccctcccct tacccaggct 780
145 taggcttaat tacctgaaag attccaggaa actgtagctt cctagctagt gtcatttaac 840
146 cttaaatgca atcaggaaag tagcaaacag aagtcaataa atatttttaa atgtc      895
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151 <213> ORGANISM: Homo sapiens
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156 gcgtggccct gtcctgcagc tccgctgctg ctttcttagt gggctcggcc aagcctgtgg 180
157 cccagcctgt cgctgcgctg gagtcggcgg cggaggccgg ggccgggacc ctggccaacc 240
158 ccctcggcac cctcaacccg ctgaagctcc tgctgagcag cctgggcatc cccgtgaacc 300
159 acctcataga gggctcccag aagtgtgtgg ctgagctggg tccccaggcc gtgggggccg 360
160 tgaaggccct gaaggccctg ctgggggccc tgacagtgtt tggctgagcc gagactggag 420
161 catctacacc tgaggacaag acgctgccca cccgcgaggg ctgaaaaccc cgccgcgggg 480
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163 aaa                                                                 543
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PATENT APPLICATION: US/09/700,770   TIME: 19:51:57

Input Set : A:\Dex-36.app
Output Set: N:\CRF3\07272001\I700770.raw

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174 Tyr Ser Ala Thr Ala Phe Leu Ile Asn Lys Val Pro Leu Pro Val Asp
175              20                  25                  30
177 Lys Leu Ala Pro Leu Pro Leu Asp Asn Ile Leu Pro Phe Met Asp Pro
178          35                  40                  45
180 Leu Lys Leu Leu Leu Lys Thr Leu Gly Ile Ser Val Glu His Leu Val
181      50                  55                  60
183 Glu Gly Leu Arg Lys Cys Val Asn Glu Leu Gly Pro Glu Ala Ser Glu
184  65                  70                  75                  80
186 Ala Val Lys Lys Leu Leu Glu Ala Leu Ser His Leu Val
187              85                  90
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191 <211> LENGTH: 420
192 <212> TYPE: PRT
193 <213> ORGANISM: Homo sapiens
195 <400> SEQUENCE: 8
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199 Leu Asn Val Glu Pro Ser Gly Ala Thr Leu Ile Arg Ile Pro Leu His
200              20                  25                  30
202 Arg Val Gln Pro Gly Arg Arg Thr Leu Asn Leu Leu Arg Gly Trp Arg
203          35                  40                  45
205 Glu Pro Ala Glu Leu Pro Lys Leu Gly Ala Pro Ser Pro Gly Asp Lys
206      50                  55                  60
208 Pro Ile Phe Val Pro Leu Ser Asn Tyr Arg Asp Val Gln Tyr Phe Gly
209  65                  70                  75                  80
211 Glu Ile Gly Leu Gly Thr Pro Pro Gln Asn Phe Thr Val Ala Phe Asp
212              85                  90                  95
214 Thr Gly Ser Ser Asn Leu Trp Val Pro Ser Arg Arg Cys His Phe Phe
215              100                 105                 110
217 Ser Val Pro Cys Trp Leu His His Arg Phe Asp Pro Lys Ala Ser Ser
218          115                 120                 125
220 Ser Phe Gln Ala Asn Gly Thr Lys Phe Ala Ile Gln Tyr Gly Thr Gly
221      130                 135                 140
223 Arg Val Asp Gly Ile Leu Ser Glu Asp Lys Leu Thr Ile Gly Gly Ile
224 145                 150                 155                 160
226 Lys Gly Ala Ser Val Ile Phe Gly Glu Ala Leu Trp Glu Pro Ser Leu
227              165                 170                 175
229 Val Phe Ala Phe Ala His Phe Asp Gly Ile Leu Gly Leu Gly Phe Pro
230              180                 185                 190
232 Ile Leu Ser Val Glu Gly Val Arg Pro Pro Met Asp Val Leu Val Glu
233          195                 200                 205
235 Gln Gly Leu Leu Asp Lys Pro Val Phe Ser Phe Tyr Leu Asn Arg Asp
236      210                 215                 220
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238 Pro Glu Glu Pro Asp Gly Gly Glu Leu Val Leu Gly Gly Ser Asp Pro
239 225                 230                 235                 240
241 Ala His Tyr Ile Pro Pro Leu Thr Phe Val Pro Val Thr Val Pro Ala
242                 245                 250                 255
244 Tyr Trp Gln Ile His Met Glu Arg Val Lys Val Gly Pro Gly Leu Thr
245                 260                 265                 270
247 Leu Cys Ala Lys Gly Cys Ala Ala Ile Leu Asp Thr Gly Thr Ser Leu
248         275                 280                 285
250 Ile Thr Gly Pro Thr Glu Glu Ile Arg Ala Leu His Ala Ala Ile Gly
251     290                 295                 300
253 Gly Ile Pro Leu Leu Ala Gly Glu Tyr Ile Ile Leu Cys Ser Glu Ile
254 305                 310                 315                 320
256 Pro Lys Leu Pro Ala Val Ser Phe Leu Leu Gly Gly Val Trp Phe Asn
257                 325                 330                 335
259 Leu Thr Ala His Asp Tyr Val Ile Gln Thr Thr Arg Asn Gly Val Arg
260                 340                 345                 350
262 Leu Cys Leu Ser Gly Phe Gln Ala Leu Asp Val Pro Pro Pro Ala Gly
263         355                 360                 365
265 Pro Phe Trp Ile Leu Gly Asp Val Phe Leu Gly Thr Tyr Val Ala Val
266     370                 375                 380
268 Phe Asp Arg Gly Asp Met Lys Ser Ser Ala Arg Val Gly Leu Ala Arg
269 385                 390                 395                 400
271 Ala Arg Thr Arg Gly Ala Asp Leu Gly Trp Gly Glu Thr Ala Gln Ala
272                 405                 410                 415
274 Gln Phe Pro Gly
275             420
278 <210> SEQ ID NO: 9
279 <211> LENGTH: 104
280 <212> TYPE: PRT
281 <213> ORGANISM: Homo sapiens
283 <400> SEQUENCE: 9
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288             20                 25                  30
290 Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly Thr Leu Ala
291         35                 40                  45
293 Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu Leu Ser Ser Leu
294     50                 55                  60
296 Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser Gln Lys Cys Val Ala
297 65                 70                 75                  80
299 Glu Leu Gly Pro Gln Ala Val Gly Ala Val Lys Ala Leu Lys Ala Leu
300             85                 90                  95
302 Leu Gly Ala Leu Thr Val Phe Gly
303             100
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VERIFICATION SUMMARY   DATE: 07/27/2001
PATENT APPLICATION: US/09/700,770   TIME: 19:51:58

Input Set : **A:\Dex-36.app**
Output Set: **N:\CRF3\07272001\I700770.raw**

L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date